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ABSTRACT

The effect of ..e institutional culture on faculty commitment, motivation, and satisfaction when filtered through other factors in the organizational environment was investigated. Preliminary findings from research on "The Organizational Context for Teaching and Learning" at the National Center for Research to Improve Postsecondary Teaching and Learning at the University of 'ichigan are presented. Data were collected by a survey with 164 items distributed over nine topical areas: academic culture; academic innovation; academic workplace; academic management climate; faculty motivation and effort; faculty involvement; academic administrative support; resource availability; and personal data. It was given to full-time administrators and faculty at 10 institutions. Thirty paths of interest were identified as a result. The most prominent faculty characteristic affecting perceptions of satisfaction, motivation, and commitment was gender. Women consistently viewed organizational environment more positively than men, and so were more satisfied and motivated. The community colleges in the study were distinct from the liberal arts and comprehensive institutions in the way that culture and climate interacted to affect personal satisfaction, commitment, and motivation to undergraduate education. The fact that governance style was a significant indicator in predicting environmental characteristics reflects the overall impact of governance style on institutional climate, personal satisfaction and motivation. Tables and figures are included. Contains 35 references. (SM)

FACULTY SATISFACTION AND MOTIVATION: How Faculty Perceive Themselves in the Institutional Environment

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"FACULTY SATISFACTION AND MOTIVATION: How Faculty Perceive Themselves in the Institutional Environment"

OBJECTIVES

Studies on the role of organizational climate in determining worker perceptions of job satisfaction have yielded mixed results. Although there is an underlying assumption that organizational factors relate to job satisfaction, motivation, and commitment in the workplace, and that motivated workers are more productive and therefore more effective, Blackburn and others (1986), point out that researchers have failed to demonstrate a consistent relationship between organizational factors and employee job perceptions. Studies conducted by Herzberg, et al., (1959) indicate that organizational climate issues are actually hygiene factors. However, these results are far from conclusive.

In this paper, we are interested in investigating the effect of the institutional culture on faculty commitment, motivation, and satisfaction when filtered through other factors in the organizational environment, such as academic innovation, academic workplace, academic management practices, resource availability, and faculty climate. This study represents preliminary findings from the current research on "The Organizational Context for Teaching and Learning" at the National Center for Research to Improve Postsecondary Teaching and Learning (NCRIPTAL) at the University of Michigan.

THEORETICAL FRAMEWORK

Colleges and universities have been criticized for a lack of effectiveness and efficiency in providing quality education to students (Astin, 1985; Bowen, 1977; Boyer, 1987). Higher education administrators and researchers have countered these attacks by presenting alternative criteria by which to evaluate their effectiveness (Blai, 1975; Brewer and Brewer, 1970; Issler, 1983; Feldman, 1976). These studies suggest that such factors as student perceptions of faculty expertise, demonstrated interest in the subject matter, enthusiasm for teaching, and use of various teaching resources may be useful as alternative measures of teacher effectiveness. This argument illustrates that despite the centrality of teaching and learning to the mission of higher education, there is no universally agreed-upon measure for determining whether institutions are able to effectively accomplish this mission (Kennedy and Bush, 1976; Good and Brophy, 1986; Peterson, 1988).

A major reason for this problem is the inability of educational researchers to develop operational definitions for effective teaching and learning (Feldman, 1988). Without a clear understanding of what constitutes competent teaching and efficacious learning it is difficult to determine standard criteria upon which to assess these activities. Cameron (1985) suggests that one reason for this difficulty is that "effectiveness" is a construct; a mental image, formulated individually, that does not translate easily into words. This phenomenon is often expressed as, "I can't tell you what good teaching/learning is, but I know it when I see it." Thus, effective

teaching and learning have more commonly been evaluated in terms of achievement-oriented quantitative outcomes, such as productivity levels and publication rates, and products, including tests and other demonstrations of skill acquisition.

Another argument that has been put forth to explain the difficulty in conducting research on teaching and learning is that learning is an intrinsic state; thus, it is dependent upon the learner's internal motivation. In this context, quality teaching is defined as those actions that facilitate or encourage the student's ability to learn (Czikszentmihalyi, 1982; Deci and Ryan, 1982). The extent to which teachers are able to incite and foster their students' motivation to learn is a measure of teaching effectiveness. Deci and Ryan (1982) and Czikszentmihalyi (1982) further suggest that those teachers who are themselves motivated to teach tend to be most successful in eliciting the same feelings in their students. "Higher education succeeds or fails in terms of motivation, not cognitive transfer of information," (Czikszentmihalyi, 1982, p. 15). In this light, faculty motivation and commitment to undergraduate education and satisfaction with teaching are appropriate outcomes for investigation.

Less attention has been paid to the qualitative side of teaching and learning as they relate to the institutional culture. Dill (1982) states that culture "is the shared beliefs, ideologies, or dogma of a group which impel individuals to action and give their action meaning," (p. 307). Peterson and others (1986) define culture as "the deeply embedded shared values, beliefs, or ideologies that participants have about their organizations." Dominant cultures may

change, but only slowly over time. The institutional culture has been shown to be a powerful influence in determining successful management strategies (Chaffee and Tierney, 1988). Peterson and Blackburn (1985) include institutional culture as an important underlying dimension of organizational effectiveness and consider faculty a key indicator.

Climate is related to culture, but they are not interchangeable terms. Climate is defined by Ferris and Gilmore (1984) as "individual perceptions of the favorability of the work context." Others have defined it as "a characteristic of organizations which is reflected in the descriptions employees make of the policies, practices, and conditions which exist in the work environment," (Schnake, 1983); "a broad class of organizational and perceptual variables that reflect individual - organizational interactions," (Glick, 1985); and "a visible manifestation of culture which is a step closer to reality than culture," (Ashforth, 1985). In the context of our study, organizational climate may be seen as an extension of institutional culture, but the shared values and beliefs expressed as climate are superficial when compared to those that are deeply imbedded.

Peterson (1988) identified three types of organizational climate that operate simultaneously in the educational environment: the objective, or observable, climate; the perceived climate, and the psychological, or felt, climate. This study focuses on elements of the perceived and psychological climates.

Based on these studies of culture, climate, and faculty outcomes the following research questions were explored:

Which institutional, faculty, and/or internal environmental characteristics affect faculty self-perceptions of their satisfaction with teaching and their motivation and commitment to undergraduate education?

How do internal environmental characteristics mediate the effect of institutional and faculty characteristics on these faculty self-perceptions?

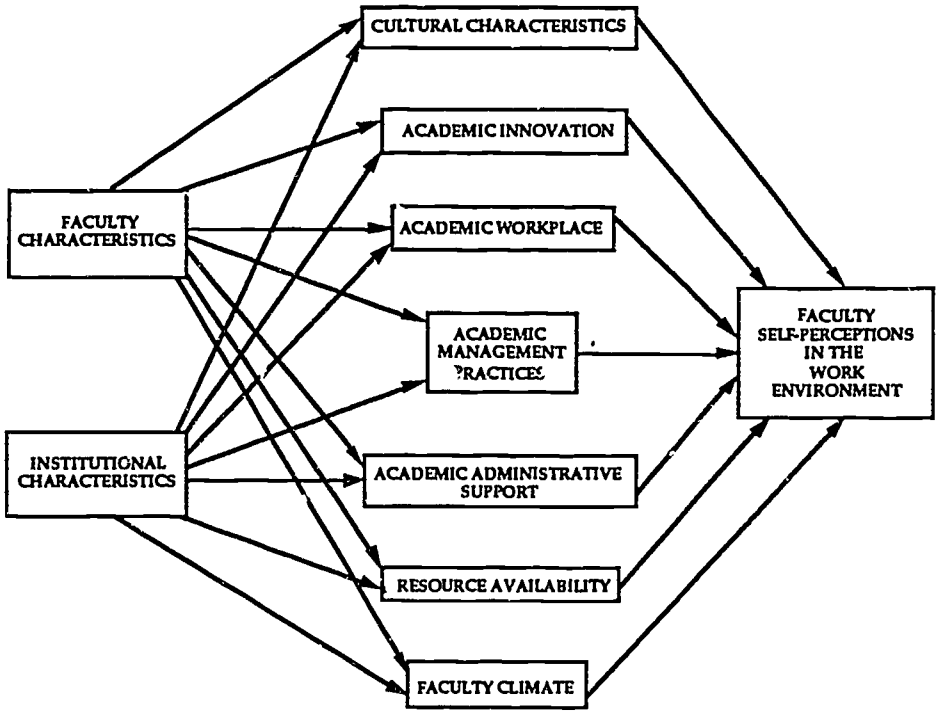
The goals of this investigation are to shed additional light on the relationship between institutional environment variables and faculty motivation, commitment, and satisfaction, and to provide new insights for administrators in managing their postsecondary institutions.

DEVELOPMENT OF THE THEORETICAL MODEL

The theoretical model guiding this particular study is based upon a five-year research project currently being conducted by Peterson and others through NCRIPTAL. In investigating whether faculty perceptions of the institutional culture and organizational climate in which they are immersed have an impact upon their performance in the teaching and learning equation, we have chosen to examine the effects of these perceptions on faculty motivation and commitment, and faculty satisfaction.

Our model is shown below. Figure 2 is a complete model, including the factors comprising each domain, and is included in the appendix.

FIGURE 1: THEORETICAL MODEL FOR STUDY



Peterson, Spencer, and White, NCRIPTAL, 1989.

The causal path model incorporates and controls for the effects of variables representing faculty demographics, including age, gender, academic rank, discipline, and tenure status of the faculty respondents; and institutional characteristics, such as the type of institution, perceived governance style, and perceived purpose of the institution. The effect of these variables, filtered through the organizational and faculty climate dimensions, on the self-reported personal motivation, commitment, and satisfaction of faculty respondents is the focus of this analysis.

SAMPLE USED FOR THE DATA

The data used for this study are part of a set collected using the Organizational Climate for Teaching and Learning survey developed at NCRIPTAL. The instrument was developed to provide corroborating data for site visit case studies, and when paired with the comprehensive case studies of the ten institutions that participated, the data set will yield its greatest benefit. This study is a "first cut" at this new data set.

The survey consists of 164 items distributed over nine topical areas:

I. Academic Culture (35 items)
II. Academic Innovation (5 Items)
III. Academic Workplace (10 items)
IV. Academic Management Climate (59 items)
V. Faculty Motivation and Effort (14 items)
VI. Faculty Involvement (14 items)
VII. Academic Administrative Support (9 items)
VIII. Resource Availability (11 items)
IX. Personal Data (12 items)

The survey was given to full-time administrators (appointments greater the 50 percent) and full-time faculty at ten institutions. Three community colleges, three private liberal arts colleges, and four comprehensive universities were selected from a stratified random sample based on their willingness to participate in the survey and on-site visit, and on their commitment to undergraduate education. These criteria were determined as part of an earlier survey, the "Academic Management Practices Survey,"which was mailed to the chief academic officer at each

institution of postsecondary education (non-proprietary) in the United States. An initial mailing of the "Organizational Climate Survey" was sent immediately following the research team's site visit; reminder postcards were sent out one week later. A second survey was mailed to nonrespondents approximately two weeks later. The overall response rate was 50.0 percent. For this analysis, only faculty responses were used (n=1123).

METHODOLOGY

All statistical analyses were conducted using SPSSx. The nature of the data being used was such that few variables stood out as being representative for the various elements in our model; thus, we created factors from the variables in the survey. This procedure produced more manageable data and provided more reliable measures upon which to base our conclusions. The results of the factor analysis nearly matched our survey categories. We made the decision to follow our categories strictly, thereby preserving the inherent logic upon which the survey and the model are based.

Because many of the factors were negatively skewed, transformations were performed to reduce skewness and the effect of outlier cases. After transformations were performed, all factors were converted to Z-scores. The results gave us factors that were normally distributed, with means of zero and standard deviations of one. Reliability tests proved the factors satisfactory. Table 1 in the appendix lists the factor reliabilities as well as the variables that make up each factor.

Path analyses were conducted in order to determine the direct and indirect effects of the exogenous variables on the outcome factors. Path analysis employs a series of simultaneous regressions. The first set of regressions involved the exogenous faculty characteristics (age, gender, tenure status, academic rank, and academic discipline) and institutional characteristics (institutional type, purpose, and governance style) regressed against the intervening factors. The second set of regressions, in which all variables and factors in the model were regressed against the outcome factor, was run twice, once for each of the two outcomes we were investigating: Self-reported faculty motivation and commitment to undergraduate education, and faculty personal satisfaction with undergraduate teaching efforts.

Direct paths were examined first. Indirect paths were then established by identifying those exogenous variables that significantly explained the intervening variables that in turn significantly explained the outcome variables. These indirect paths were calculated by multiplying the standardized partial regression coefficients (beta values) of the significant direct paths, exogenous to intervening and intervening to outcome.

We were most interested in results demonstrating indirect effects with signs opposite those of their direct effects. The importance of this result is in its implication for the institutional leader who may attempt to implement cultural changes over time with the intent of improving faculty morale. These actions may instead result in an erosion of morale if the indirect effects are

negative on the faculty outcomes. Those indirect effects with signs like those of their direct effects indicate that the effect in the indicated direction may be stronger than the direct effect alone would indicate.

RESULTS

A total of 28 separate regressions were carried out for this path analysis. In each case, the model proved to be significant (Significant F = .0000). In addition, as part of the final two regressions in which all exogenous and intervening variables were entered against the outcome factors, histograms were computed to check the distribution of the standardized residuals. This graph was roughly normal. Scatter plots and partial plots indicate that the distributions of the residuals were homoscedastic; no noticeable patterns emerged.

For the first outcome factor, "Personal Satisfaction with Teaching Undergraduate Education," 49.2% of the variance was explained in the final regression. Seven intervening factors proved to be significant predictors of this outcome: The characteristics of teamwork and market/competitive environments (CULTTEAM and CULTMRKT); emphasis on faculty selection, evaluation and reward based on undergraduate education (FACSEL); institutional support for undergraduate education (INSTSUPP); institutional facilities (INSTFCIL); and faculty evaluation of their peers in satisfaction with their teaching, and their peers' motivation and commitment to undergraduate education (INSTSATS and INSTMOTV). No exogenous

variables were significant on the outcome. However, each of the significant intervening variables was significantly explained (Significant F = .0000) by two or more exogenous variables (see Table 2).

On the second outcome factor, "Personal Motivation and Commitment to Undergraduate Education," the model explained 30.7% of the variance. Four intervening variables were significant: Professionalism in the academic workplace (ACADSETT); institutional support of undergraduate education (INSTSUPP); faculty involvement in student academic policy (FINSTUPL); and peer motivation and commitment to undergraduate education (INSTMOTV). Again, each of these intervening variables was significantly explained by two or more exogenous variables (see Table 3). In addition, the exogenous variable representing liberal arts colleges, "Institutional Type: Liberal Arts," was directly significant on this outcome factor ($p<.05$).

DISCUSSION

Based upon our criteria, we identified 30 paths of interest. As illustrated by Table 2 and Table 3 in the Appendix, a number of indirect paths strengthen the relationship between the exogenous variables and the outcomes. Institutional differences and differences in discipline are notable but not quantifiable, due to the nominal nature of these variables.

Points A1 to A7 discuss findings related to the "Personal Satisfaction with Teaching" outcomes listed in Table 2.. Points B1 to B4 discuss findings related to the second outcome factor, "Personal

Motivation and Commitment to Undergraduate Education," listed in Table 3.

(A1) The "Culture: Teamwork" factor has a negative effect on "Personal Satisfaction with Teaching." Karl Weick (1984), suggests that "actions that strengthen the community [of scholars] weaken the scholarship [and] actions that strengthen the scholarship weaken the community." Floyd (1985) points out that faculty participation may lead to lower faculty satisfaction if the participation is burdensome. According to these views, faculty required to spend time on committees and fulfilling other teamwork functions are apt to feel these activities interfere with their teaching.

Faculty identifying the purpose of their institutions as improving society or developing social consciousness, and those who see their mode of governance as either collegial or autonomous, view these relationships as positive to their satisfaction with teaching. However, these factors all have a significant positive effect on the Teamwork characteristic; thus, they have indirect negative consequences on satisfaction with teaching. For example, a leader may attempt to move the institutional culture toward a collegial style of governance in an attempt to improve faculty, and thereby institutional, morale. However, if these activities force faculty to participate in a teamwork environment, the result may be the opposite of what was intended.

(A2) "As might be expected, competitive environments were negatively related to Personal Satisfaction". After controlling for institutional and faculty characteristics, community colleges in our

study were less apt to be perceived as market driven (competitive) by their faculty. A look at the means for each of the institutions in our study shows that means for community colleges were highest for innovative (entrepreneurial) and teamwork environments. Apparently faculty within these institutions perceive themselves to be proactive rather than reactive in assessing community needs. Thus, the resulting indirect path reinforces community college faculty's "Personal Satisfaction".

As age increases, faculty are more likely to see the institutional environment as market-oriented. The negative indirect effect of age on satisfaction is counter to the positive direction of the direct path of age on satisfaction.

(A3) "Faculty Selection" represents the institutional emphasis on undergraduate teaching in matters relating to faculty selection, evaluation, and rewards (including promotion). It has a negative effect on personal satisfaction. Since administrators generally make these decisions, it may be, as Astin (1985) contends, that faculty view administrators with suspicion and contempt, and fear the loss of their autonomy. In addition, Eble (1983) points out that given "the inadequacy of the procedures for identifying best teachers", these awards may be "fomenters of discord".

An examination of the variables which make up this factor may explain the negative effect of community colleges on the intervening factor. Faculty at the community colleges in our sample may not see undergraduate education (teaching) as a factor in promotion, teaching ability may not be perceived as a basis for selection, merit

is not used in determining their salaries, and evaluation of teaching is often problematic.

Additionally, community colleges in our study have higher proportions of tenured to non-tenured faculty. Therefore, being tenured has a negative effect on the intervening factor as well. Also, since community colleges generally call their faculty "instructors", which we ranked at the low end of our scale, "Rank" had a positive effect on the intervening factor. As faculty rank ascends from instructor to professor, faculty are more likely to believe that faculty selection, evaluation, and reward are based on undergraduate educational efforts. This is in agreement with the result that faculty who see their institutions as being governed in the collegial style (not community colleges), see undergraduate teaching as the basis for faculty selection, evaluation, and rewards.

The resulting indirect effects suggest that personal satisfaction is reinforced if a faculty member resides in a community college, while faculty will be more dissatisfied at institutions with collegial governance systems.

(A4) The "Institutional Support" factor measures faculty perception of the amount of support for improving undergraduate education by board members, administrators, and faculty. As might be expected, this factor has a significant positive effect on personal satisfaction: The more support for undergraduate education from these sources, the better faculty members feel about their undergraduate teaching. The positive indirect effects of female faculty, faculty of higher rank, and faculty at institutions with

autonomous, rational, or collegial governance styles, further reinforce these faculty members' satisfaction with their teaching.

(A5) As with "Institutional Support", faculty in our survey said that the adequacy of their institutions' educational facilities also had a positive effect on "Personal Satisfaction with Teaching". The personal satisfaction of liberal arts and community college faculty and older faculty is reinforced because they are more satisfied with the educational facilities at their institutions. Tenured faculty, on the other hand, appear to be less satisfied. This is results from the negative effect of tenure on satisfaction with institutional facilities.

(A6, A7) We view "Institutional Satisfaction" and "Institutional Motivation and Commitment" as measures of morale because they are faculty observations of their peers. It may also be called "Faculty Climate." If faculty perceive morale in their institution to be high, they are more likely to be satisfied in all areas, including their teaching. Women faculty, community college faculty, faculty who perceive their institution's purpose to be instilling in students a sense of values, and those faculty in collegial, autonomous, and rational governance systems, are all more likely to perceive their colleagues as having high morale, and thus be more satisfied themselves. The magnitude of the indirect effects suggests that this intervening factor is a particularly strong indicator of "Personal Satisfaction with Teaching".

(B1) "Professionalism in the Academic Setting" includes faculty autonomy, trust between faculty and administrators, and freedom for new ideas. It has a significant positive effect on faculty

"Personal Motivation and Commitment to Undergraduate Education." In our sample, female faculty and faculty at institutions perceived to have collegial, autonomous, and rational governance systems, are more motivated and committed because they are more likely to perceive professionalism in the academic setting.

(B2) "Institutional Support" predicts "Personal Motivation and Commitment" as well as "Personal Satisfaction with Teaching." Interestingly, the same exogenous variables predict both outcomes (see the discussion in A4).

(B3) The "Faculty Involvement with Student Academic Policies" factor includes decisions on assessment policies and support services policies, resource allocation relating to undergraduate education, and student recruitment policies. Faculty across the institutions in our sample, as defined by institutional purpose, are motivated by this kind of involvement. The indirect effects also show that community college, female, and older faculty are even more likely to be motivated toward undergraduate education. Tenured faculty are less motivated because they are significantly less likely to see themselves involved in student academic policies.

(B4) Female and community college faculty were significantly more likely to rate their peers' Personal Motivation and Commitment" highly. As a result, since peer motivation is a significant predictor of personal motivation, these faculty are more highly motivated and committed to undergraduate education than they would be if they were male or at another type of institution

CONCLUSION

The most prominent faculty characteristic affecting perceptions of satisfaction , motivation, and commitment was gender (A4, A7, B1, B2, B3, and B4). Women consistently viewed their organizational environment more positively than their male counterparts, and so were more satisfied and motivated.

Clearly, the community colleges in our study were distinct from the liberal arts and comprehensive institutions in the way that culture and climate interacted to affect personal satisfaction, commitment, and motivation to undergraduate education (A2, A3, A5, A6, A7, B3, and B4). Further, faculty members who see their institutions as having collegial governance styles are more satisfied overall (A1, A3, A4, and A6) but these positive direct effects may be countered by negative indirect effects (A1 and A3). The fact that governance style (A1, A3, A4, A6, B1, and B2) was a significant indicator in predicting environmental characteristics is a reflection of the overall impact of governance style on institutional climate, and ultimately individual satisfaction and personal motivation and commitment to undergraduate teaching and learning.

We have attempted to provide a sense of the faculty responses to the "Organizational Climate Survey", and suggest some interpretations based on an analysis of indirect paths. The study also suggests some areas for further investigation. These include:

1. Why do female faculty members respond differently than their male counterparts?

2. What combinations of factors cause autonomous, rational, and collegially-governed institutions to significantly predict several intervening variables?

3. How is institutional uniqueness played out in the culture?

4. Can we define ways in which community college cultures differ from those in liberal arts and comprehensive institutions?

These questions, as well as other results of the study, suggest a framework for further investigation of institutional culture in higher education.

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APPENDIX

FIGURE 2: THEORETICAL MODEL WITH VARIABLES/FACTORS

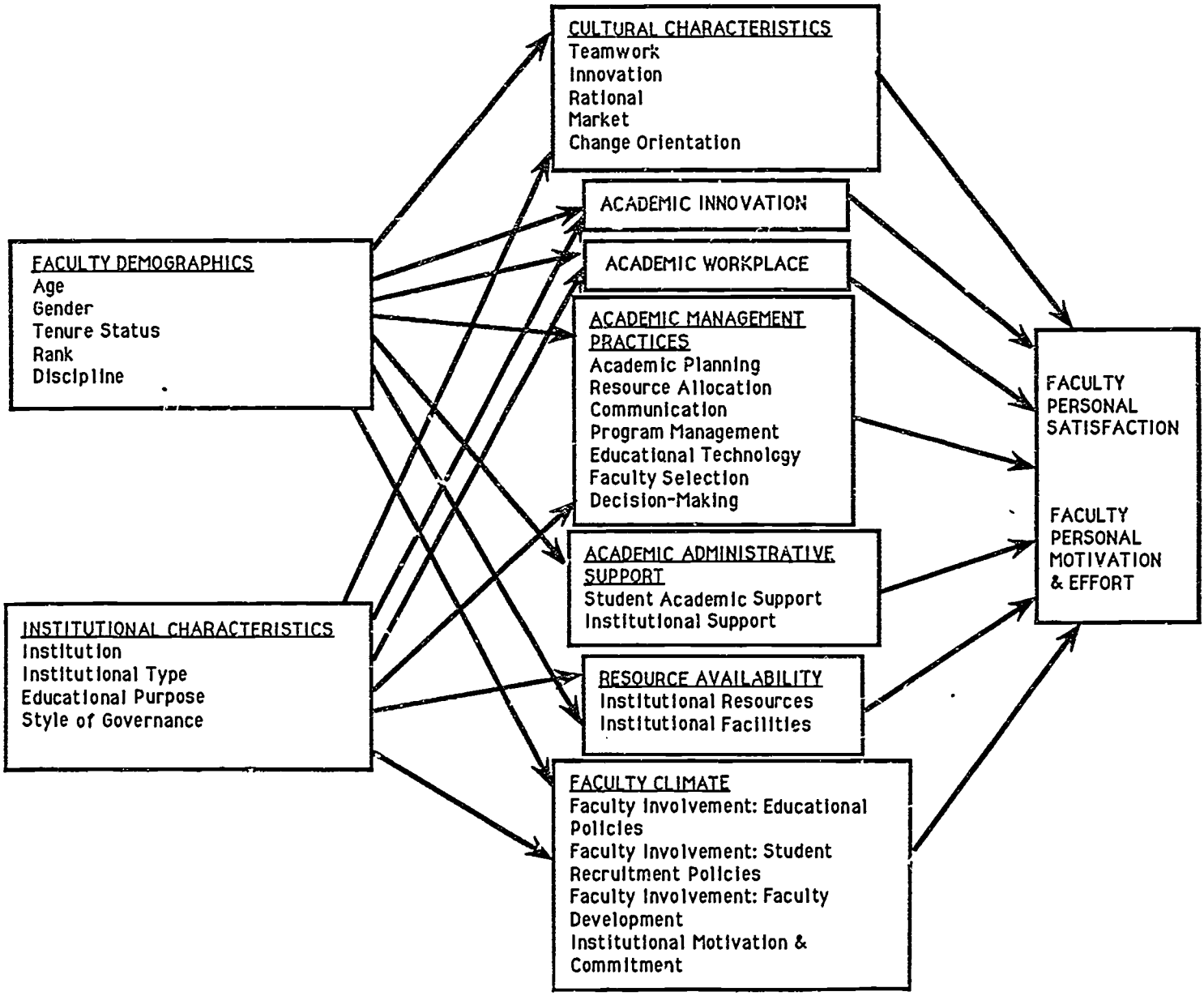

TABLE 1: Reliabilities of Indices

Survey Question No.	Index/Variable Label	Index Reliability
I. Academic Culture		
FACTOR 1	CULTURE: TEAMWORK	Alpha = .67
I -1A	Characteristics: Loyalty, commitment	
I -2A	Leadership: Mentor, sage, parent-figure	
I - 3A	Success: Development of human resources	
I - 4A	Style: Teamwork, consensus, participation	
FACTOR 2	CULTURE: INNOVATION	Alpha = .72
I -1B	Characteristics: Meet challenges, take risks	
I - 2B	Leadership: Entrepreneur, innovator, risk-taker	
I - 3B	Success: Unique, cutting-edge outputs	
I - 4B	Style: Individual initiative, freedom, uniqueness	
FACTOR 3	CULTURE: RATIONAL	Alpha = .75
I -1C	Characteristics: Formal procedures, rules, policies; stability	
I - 2C	Leadership: Coordinator, organizer, efficiency expert	
I - 3C	Success: Efficiency, stability	
I - 4C	Style: Security, longevity, predictability	
FACTOR 4	CULTURE: MARKET	Alpha = .72
I -1D	Characteristics: Competition, production	
I - 2D	Leadership: A hard-driver, achiever, competitor	
I - 3D	Success: Aggressively obtain advantage over peer schools	
I - 4D	Style: Hard-driving competitiveness	
II. Academic Innovation		
FACTOR 1	ACADEMIC INNOVATION	Alpha = .82
II - 2	Innovation in Course Development	
II - 3	Innovation in Curricular Development	
II - 1	Innovation in Teaching Methods	
II - 4	Innovation in Systems of Delivery	
II - 5	Responsiveness to External Community	
III. Academic Workplace		
FACTOR 1	CHALLENGE OF ACADEMIC WORK	Alpha = .83
III - 9	Designing Meaningful T/L Activities	
III - 10	Designing Challenging T/L Activities	
III - 8	Opportunities for Growth	
FACTOR 2	PROFESSIONALISM IN THE ACADEMIC SETTING	Alpha = .80
III - 1	Faculty Autonomy	
III - 7	Fair Treatment	
III - 3	Trust Among Faculty and Administrators	
III - 5	Tolerance for Diversity	
III - 4	Freedom for New Ideas	
III - 6	Consistent Patterns of Decisions	
IV. ACADEMIC MANAGEMENT CLIMATE		
FACTOR 1	EDUCATIONAL MISSION AND GOALS	Alpha = .79
IV - A4	Student Involvement in Learning	
IV - A1	Mission and Goals for Undergrad Ed	
IV - A2	Image of Commitment to Undergrad Ed	
IV - A3	Undergraduate Teaching	
IV - A5	Student Learning Outcomes	
IV - A8	General Education	
IV - A7	Discipline-Oriented Education	
IV - A6	Professional/Career Education	
FACTOR 2	ACADEMIC PLANNING	Alpha = .79
IV - B10	Planning for Curriculum and Programs	
IV - B9	Institution Planning Process	
IV - B12	Planning Reflecting External Trends	
IV - B13	Dissemination of Info on Trends	
IV - B11	Planning at Academic Unit Level	
FACTOR 3	GOVERNANCE	
IV - C15	Coordination on Academic Decisions	Alpha = .83
IV - C16	Implementing Decisions on Undergrad Ed	
IV - C14	Clear Decision Making Processes	
IV - C17	Mechanisms for Conflict	
IV - C18	Decentralization of Decision Making	
FACTOR 4	RESOURCE ALLLOCATION	Alpha = .83
IV - D22	Rational Process for Resource Allocation	
IV - D21	Equitable Allocation of Resources	
IV - D20	Resources for Improving Undergrad Ed	
IV - D19	Resource Priority for Undergrad Ed	
IV - D23	Performance Data for Resource Allocation	
FACTOR 5	COMMUNICATION/INFORMATION	Alpha = .79
IV - E26	Performance Data Used in Program Design	
IV - E29	Dissemination of Info on T/L Issues	
IV - E28	Data Used in Program Evaluation	
IV - E27	Use of Student Data in Teaching	
IV - E24	Discussion about Undergrad Education	
IV - E25	Cross-Disciplinary Discussions on T/L	
FACTOR 6	STUDENT RECRUITMENT AND ENROLLMENT MGT	Alpha = .68
IV - F30	Marketing and recruitment	
IV - F33	Student retention	
IV - F32	Student orientation and advising	
IV - F31	Coordination of marketing and planning	
FACTOR 7	ACADEMIC CURRICULAR AND PROGRAMS MGT	Alpha = .79
IV - G38	Process for reviewing existing programs	
IV - G37	Process for developing new programs	
IV - G34	Curriculum evaluation used in decision making	
IV - G35	General education requirements	
IV - G36	Comprehensive exam requirement	
FACTOR 8	EDUCATIONAL TECHNOLOGY	Alpha = .76
IV - H40	Use of other educational technology	
IV - H39	Use of educational computing	
IV - H41	Incentives for use of educational technology	

Survey Question No.	Index/Variable Label	Index Reliability
FACTOR 9	FACULTY AND INSTRUCTIONAL DEVELOPMENT	Alpha = .80
IV - I43	Teaching improvement	
IV - I42	Faculty development	
IV - I44	Planning for faculty staffin	
FACTOR 10	FACULTY SELECTION, EVALUATION, AND REWARDS	Alpha = .83
IV - J46	Faculty promotion based on teaching	
IV - J48	Merit system based on teaching	
IV - J47	Evaluation of teaching performance	
IV - J45	Faculty selection based on teaching	
IV - J49	Recognition of outstanding teachers	
FACTOR 11	STUDENT ACADEMIC SUPPORT SERVICES	Alpha = .75
IV - K52	Programs for minority students	
IV - K51	Student career counseling and programs	
IV - K50	Student enrichment programs	
IV - K53	Programs for "at risk" students	
FACTOR 12	STUDENT ENTRY ASSESSMENT	Alpha = .82
IV - L55	Assessing entry-level college skills	
IV - L54	Assessing entry-level basic skills	
FACTOR 13	STUDENT OUTCOMES ASSESSMENT	Alpha = .81
IV - L57	Assessing expections, goals, attitudes	
IV - L58	Assessing learning outcomes or value added	
IV - L56	Assessing progress, retention, graduation rates	
IV - L59	Assessing post-graduation performance	
V. Faculty Motivation and Effort		
FACTOR 1	INSTITUTIONAL SATISFACTION WITH TEACHING	Alpha = .78
V - 1	Satisfaction with work	
V - 2	Satisfaction with institution	
V - 3	Satisfaction with teaching performance	
FACTOR 2	INSTITUTIONAL COMMITMENT AND MOTIVATION	Alpha = .85
V - 4	Commitment to teaching	
V - 5	Commitment to disciplines/professional fields	
V - 6	Motivation to improve as teachers	
V - 7	Motivation to improve undergraduate education	
FACTOR 3	PERSONAL SATISFACTION WITH TEACHING	Alpha = .65
V - 8	Satisfaction with your work	
V - 9	Satisfaction with your institution	
V - 10	Satisfaction with your teaching performance	
FACTOR 4	PERSONAL COMMITMENT AND MOTIVATION	Alpha = .72
V - 11	Commitment to teaching	
V - 12	Commitment to your discipline	
V - 13	Motivation to improve as a teacher	
V - 14	Motivation to improve undergraduate education	
V. Faculty Involvement		
FACTOR 1	FACULTY INVOLVEMENT IN EDUCATIONAL POLICY	Alpha = .85
VI - 11	New undergraduate faculty selection	
VI - 2	Decisions on undergraduate policies	
VI - 5	Undergraduate curriculum development	
VI - 1	Academic planning for undergraduate education	
VI - 12	Faculty promotion and evaluation	
VI - 6	New program development	
FACTOR 2	FACULTY INVOLVEMENT IN STUDENT ACADEMIC POLICY	Alpha = .81
VI - 4	Student recruitment policies	
VI - 13	Decisions on support service policies	
VI - 3	Resource allocation	
VI - 14	Decisions on assessment policies	
FACTOR 3	FACULTY INVOLVEMENT IN FACULTY DEVELOPMENT	Alpha = .82
VI - 10	Teaching/learning workshops	
VI - 9	Instructional development	
VI - 8	Faculty development	
VI - 7	Use of educational technology	
VII. Academic Administrative Support		
FACTOR 1	INSTITUTIONAL ACADEMIC ADMINISTRATIVE SUPPORT	Alpha = .71
VII - 3	Deans and Department Chairs	
VII - 2	President and Executive Officers	
VII - 4	Faculty Governance Bodies	
VII - 1	Board members	
VII - 5	Faculty	
FACTOR 2	STUDENT ACADEMIC ADMINISTRATIVE SUPPORT	Alpha = .82
VII - 7	Students	
VII - 9	Student Support Units	
VII - 6	Student Governance Bodies	
VII - 8	Academic Support Units	
VIII. Resource Availability		
FACTOR 1	INSTITUTIONAL RESOURCES	Alpha = .78
VIII - 6	Instructional improvement	
VIII - 8	Faculty development	
VIII - 10	Academic support services	
VIII - 5	New undergraduate initiatives	
VIII - 11	Educational evaluation and research	
VIII - 9	Student support services	
VIII - 7	Educational computing	
VIII - 4	Faculty salaries	
FACTOR 2	INSTITUTIONAL FACILITIES	Alpha = .67
VIII - 3	Student study space	
VIII - 2	Library facilities	
VIII - 1	Teaching and classroom facilities	

TABLE 2: Path Summaries for PERSONAL SATISFACTION Outcome

INTERVENING VARIABLES	EXOGENOUS VARIABLES		OUTCOME VARIABLES		
(A1)			SATISFACTION		
		CULTTEAM	DIRECT	INDIRECT	
Culture:Teamwork			-.095*		
	Discipline	-.075**	.020	.007	
	Institution	-.073**	.008	.007	
	Purpose: Improving Society	.224**	.059	-.021	+ -
	Purpose: Value	.192**	.017	-.018	+ -
	Governance:Autonomy	.301**	.050	-.029	+ -
	Governance: Collegial	.814**	.077	-.058	+ -
	R Square	.370**			
(A2)			SATISFACTION		
		CULTMRKT	DIRECT	INDIRECT	
Culture: Market			-.125**		
	Institution	.155**	.008	-.019	+ -
	Type: Community College	-.257**	.018	.032	>
	Age	.111**	.043	-.014	+ -
	R Square	.175**			
(A3)			SATISFACTION		
		FACSEL	DIRECT	INDIRECT	
Faculty Selec, Eval, Reward			-.081*		
	Institution	.207**	.008	-.017	+ -
	Type Community College	-.192**	.018	.015	
	Tenure	-.110**	.038	.009	
	Rank	.077*	.003	-.008	+ -
	Governance: Collegial	.401**	.077	-.032	+ -
	R Square	.322**			
(A4)			SATISFACTION		
		INSTSUPP	DIRECT	INDIRECT	
Institutional Support			.109**		
	Institution	.082*	.008	.007	
	Gender	.116**	.011	.013	>
	Rank	.081*	.033	.009	
	Governance:Autonomy	.238*	.050	.026	
	Governance: Formal/Rational	.295*	.041	.032	
	Governance: Collegial	.523**	.077	.057	
	R Square	.249**			
(A5)			SATISFACTION		
		INSTFCIL	DIRECT	INDIRECT	
Institutional Facilities			.076*		
	Institution	.248**	.008	.019	>
	Type: Liberal Arts	.238**	-.048	.019	- +
	Type: Community College	.275**	.018	.022	>
	Age	.191**	.043	.015	
	Tenure	-.087*	.038	-.007	+ -
	R Square	.246**			
(A6)			SATISFACTION		
		INSTSATS	DIRECT	INDIRECT	
Institutional Satisfaction			.424**		
	Type: Community College	.150**	.018	.064	>
	Purpose: Value	.173**	.017	.073	>
	Governance: Autonomy	.272*	.050	.115	>
	Governance: Formal/Rational	.280*	.041	.119	>
	Governance: Collegial	.492**	.077	.209	>
	R Square	.247**			
(A7)			SATISFACTION		
		INSTMOTV	DIRECT	INDIRECT	
tutional Motiv & Commit			.081*		
	Type: Community College	.101**	.018	.008	
	Gender	.083**	.011	.007	
	R Square	.137**			

Overall R SQUARE for Personal Satisfaction outcome: .492**

* p<.05
** p<.01

TABLE 3: Path Summaries for PERSONAL MOTIVATION AND COMMITMENT Outcome

INTERVENING VARIABLES	EXOGENOUS VARIABLES	OUTCOME VARIABLES			
(B1)			MOTIVATION & COMMITMENT		
		ACADSETT	DIRECT	INDIRECT	
Professionalism in Acad Workplace			.108 *		
	Gender	.085 * *	.053	.009	
	Governance: Autonomy	.272 *	-.065	.029	- +
	Governance: Formal/ Rational	.311 *	-.057	.034	- +
	Governance: Collegial	.501 * *	-.048	.054	- +
	R Square	.262 * *			
(B2)			MOTIVATION & COMMITMENT		
		INSTSUPP	DIRECT	INDIRECT	
Institutional Support			.153 * *		
	Institution	.082 *	-.023	.010	- +
	Gender	.118 * *	.053	.018	
	Rank	.081 *	.003	.012	>
	Governance: Autonomy	.238 *	-.085	.038	- +
	Governance: Formal/ Rational	.295 *	-.057	.045	- +
	Governance: Collegial	.523 * *	-.043	.080	- +
	R Square	.249 * *			
(B3)			MOTIVATION & COMMITMENT		
		FINSTUPL	DIRECT	INDIRECT	
Faculty Involv with Stu Acad Policy			.097 *		
	Institution	.107 * *	-.023	.010	- +
	Type: Community College	.187 * *	-.007	.018	- +
	Gender	.116 * *	.051	.011	
	Tenure	-.125 * *	-.036	-.012	
	Age	.082 *	-.012	.008	- +
	Purpose: Thinking	.188 * *	-.015	.018	- +
	Purpose: Knowledge	.188 * *	.034	.018	
	Purpose: Improvement	.209 * *	-.018	.020	- +
	Purpose: Value	.154 *	-.025	.015	- +
	R Square	.209 * *			
(B4)			MOTIVATION & COMMITMENT		
		INSTMOTV	DIRECT	INDIRECT	
Inst. Motivation & Commitment			.401 * *		
	Type: Community College	.101 * *	-.007	.040	- +
	Gender	.083 * *	.053	.033	
	R Square	.137 * *			

Overall R SQUARE for Personal Motivation and Satisfaction outcome: .307***

* p<.05
** p<.01